1FW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	: Kevin I. Bertness	
Appln. No.	: 10/804,773	
Filed	: March 18, 2004	Group Art Unit: 2838
For	: APPARATUS AND METHOD FOR COUNTERACTING SELF DISCHARGE IN A STORAGE BATTERY	Examiner:
Docket No.	: C382.12-0190	R.B. Patel

RESPONSE

I HEREBY CERTIFY THAT THIS PAPER IS BEING SENT BY U.S. MAIL, FIRST CLASS, TO THE COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450, THIS
4th DAY OF NOVEMBER, 2005.
A Rego
PATENT ATTORNEY

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is in response to the Office Action dated August 11, 2005. In the Office Action, all pending claims 1-18, 23-41, 46-64, 69-77 and 82-111 were rejected. Applicant respectfully requests reconsideration and allowance of all pending claims.

In section 2 of the Office Action, the Examiner rejected claims 1 and 4-5 under §102(b) as being anticipated Kellett et al., U.S. Patent No. 5,637,978.

Claim 1, which is directed to an apparatus for counteracting self discharge in a storage battery, includes "a charge supply battery configured to provide a supply voltage; and a DC-DC converter circuit having an input configured to electrically couple to the charge supply battery and an output configured to electrically couple to terminals of the storage battery; wherein the charge supply battery comprises a small battery." (Emphasis Added.)

The Office Action suggests that Kellett (Figure 2 and column 4, lines 10-65) discloses the above element of claim 1. However, the pointed out figure and language of Kellett relates to an emergency battery charger for use in motor vehicles for

charging a fully or partially discharged starter storage battery. One of the functions of the emergency battery charger of Kellett is to charge a "dead" starter storage battery. (With the emergency battery charger of the present invention, it will take 15 minutes or less to transfer enough energy to start a vehicle having a "dead" vehicle storage battery (see col. 6, lines 1-8 of Kellett)). To provide this charging function, the Kellett device includes an internal charging battery 30, which has a terminal voltage that does not substantially differ from the terminal voltage of the starter storage battery 20. Also, internal charging battery 30 of Kellett is capable of providing a relatively high charging current to a "dead" vehicle battery. In contrast, as noted above, the present invention is directed to an apparatus for counteracting self discharge in a storage battery (which certainly does not need to provide a relatively high charging current) and therefore can, and does, employ "a charge supply battery" that is "a small battery." On page 21, lines 10-13 of the specification, the charge supply battery of the present invention is described as a "household" battery or "small" battery with 1.5 V cells (such as D, C, AA and AAA batteries) that can be readily purchased off the shelf. Such a "small" charge supply battery is clearly unsuitable for the Kellett device and accordingly not disclosed in the Kellett patent. Consequently, Kellett does not anticipate claim 1. Claims 4 and 5 are allowable at least by virtue of their dependency from claim 1.

In section 4 of the Office Action, claims 2-3, 6-18 and 82-94 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kellett et al. in combination with Barrett (U.S. Patent # 5,684,678).

Claims 2 and 3 depend from claim 1 and therefore include all the limitations of claim 1. For reasons provided above, Kellett does not anticipate claim 1. Barrett does not

overcome the deficiencies of Kellett. Thus, claims 2 and 3 are allowable at least by virtue of their dependency from independent claim 1.

With regard to claims 6-18 and 82-94, the Office Action suggests that it would be obvious to replace the charge supply battery of Kellett with small batteries such as D, C, AA, AAA, etc. According to the Office Action, the suggestion for doing so is because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin, 125 USPQ 416*. However, the mere fact that the prior art system could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. See, *(In re Gordon)*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). As noted above, to provide a relatively rapid recharging function, the Kellett device includes an internal charging battery 30, which has a terminal voltage that does not substantially differ from the terminal voltage of the starter storage battery 20. Also, as noted earlier, internal charging battery 30 of Kellett is capable of providing a relatively high charging current to a "dead" vehicle battery. In contrast, the present invention is directed to an apparatus for counteracting self discharge in a storage battery (which does not need to provide a relatively high charging current) and therefore employs "a charge supply battery" that is "a small battery," such as a D, C, AA, AAA, etc., battery. Such "small" charge supply batteries are clearly unsuitable and undesirable for the Kellett device and accordingly there is no teaching, suggestion or incentive in the Kellett reference for one of ordinary skill in the art to substitute a small battery for the approximately 12 volt charging battery 30 of Kellett.

In section 5 of the Office Action, the Examiner rejected claims 23, 36-41, 46-51, 69 and 72-77 and 95-111 under

§103(a) as being unpatentable over Tomantschger, U.S. Patent No. 5,194,799 in combination with a paper published by Electronix Express, November 10, 1998 and further in combination with Bertness, U.S. Patent No. 6,249,124.

Tomantschger discloses a booster battery assembly having a booster battery that is not protected from self-discharge by a charge supply battery and a DC-DC converter. The Electronix Express published paper only describes, in general, the design and operation of DC-DC converters, and Bertness relates to an electronic battery tester with an internal battery. None of these references taken alone or in combination describe "a booster battery configured to provide starting energy to a vehicle; a charge supply battery configured to provide a supply voltage; and a DC-DC converter circuit having an input electrically coupled to the charge supply battery and an output electrically coupled to the booster battery; wherein the charge supply battery comprises a small battery; and wherein the DC-DC converter circuit is configured to provide a charging voltage at the output having a magnitude greater than a magnitude of the supply voltage" as required by claim 23. Furthermore, the Examiner provided no evidentiary basis for modifying the cited references to arrive at the present invention as claimed by claim 23. Therefore, the rejection of claim 25 must be withdrawn.

Independent claims 46 and 69 have elements similar to that of independent claim 23. Thus, for the same reasons as independent claim 23, Applicants submit that independent claims 46 and 69 are allowable as well. Moreover, Applicants respectfully submit that the dependent claims are also allowable by virtue of their dependency, either directly or indirectly from the allowable independent claims. Further, the dependent claims set forth numerous elements not shown or suggested in the prior art.

In view of the foregoing, Applicants respectfully request reconsideration and allowance of all pending claims 1-18, 23-41, 46-64, 69-77 and 82-111. Favorable action upon all claims is solicited.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: _____

Alan G. Rego, Reg. No. 45,956
Suite 1400 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

AGR:tkj